Tobacco Use and Exposure

Definition: 1) The intake of tobacco smoke from cigarettes, cigars, and pipes, either by the individual smoking or via exposure to environmental tobacco smoke. 2) The oral absorption of nicotine and related toxins through smokeless tobacco (snuff, dip, chew).

Summary

Tobacco use is the leading preventable cause of death and disease in our society. Smoking accounted for 8,601 deaths in Washington in 1993. Additional illness and death resulted from exposure to environmental tobacco smoke, use of smokeless tobacco, and smoking by pregnant women.

Adult smoking rates have been declining slightly, but rates among adolescents show notable increases. Tobacco use is deeply ingrained in the culture, and the tobacco industry spends an estimated $120 million each year promoting its products in Washington. Tobacco use reduction activities include policy and legislative strategies, as well as more traditional health promotion efforts.

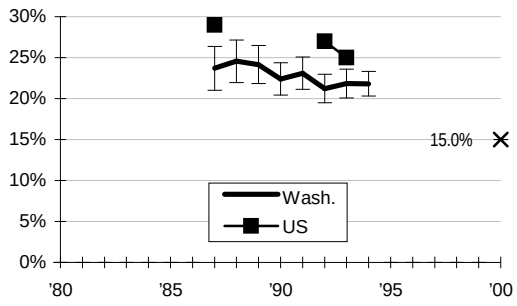
Time Trends

In recent years, smoking prevalence has declined somewhat among adults in Washington and in the US as a whole. In 1993, 21.8% (±1.7)of Washington adults reported current smoking, compared with 25% nationally.

Among Washington 8th graders, reported smoking experimentation increased from 31.0% (±1.3) in 1992 to 48.9%(±2.0) in 1995. Reported experimentation with smokeless tobacco also increased among 8th graders, with 22.9% reporting use in 1995, up from 13.1% in 1992.

Current Smoking Prevalence

Percent of adults who smoke, with Washington year 2000 goal



In 1994, 16% (±0.3)of women giving birth in Washington reported having smoked during their pregnancy, down from 23.6.0% (±0.3) in 1985. The 1993 national rate for smoking during pregnancy was 15.8%.

Year 2000 Goals

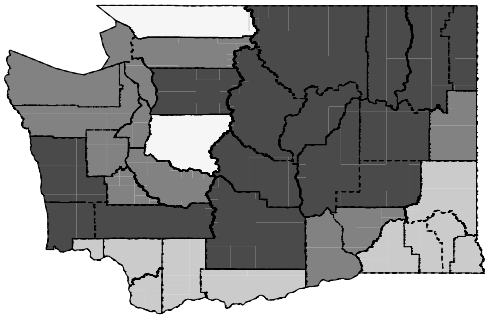
Washington's goals for the year 2000 are to decrease adult smoking prevalence to 15%, youth smoking (12th graders) to 10%, and smoking during pregnancy to 10%. The adult smoking prevalence for 1994 was 21.8% (±1.5). In 1995, 24%(±4) of Washington 12th graders surveyed reported regular cigarette smoking.

Geographic Variation

Prevalence of current cigarette smoking by region for 1992-1994 is presented in the map below. The lowest prevalence of reported smoking was in Whatcom County. The highest was in the region comprised of Grays Harbor, Lewis and Pacific Counties. County estimates of smokeless tobacco use and of adolescent smoking are not available.

From 1992-94, the counties with the highest percent of women smoking during pregnancy were

Adults Reporting Current Smoking Percentage by Region, 1991 - 1993



Percentages

- 14.7 to 17.9
- 18.0 to 21.5
- 21.6 to 23.9
- 24.0 to 28.6

State Average: 21.6 %
National Rate: NA

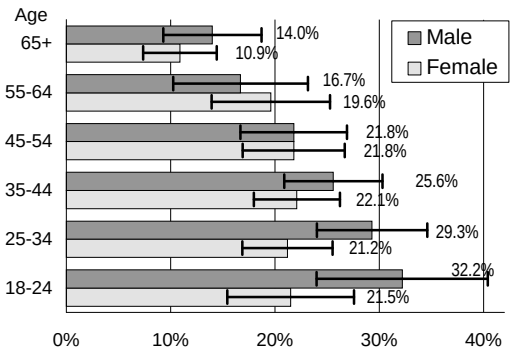
Grays Harbor, Pend Oreille, Columbia, Cowlitz, Pacific, Mason, Jefferson, Stevens and Clallam. The counties with the lowest percent of smoking during pregnancy were Adams, Whitman, Franklin, Chelan, Douglas, King and Grant.

Age and Gender

Smoking prevalence among Washington adults in 1994 was highest among 18-24 year olds. It decreased with age, due in part to the early mortality of smokers and in part to people stopping use. Prevalence was lowest among those age 65 and older is.

Males (24.3%) more frequently reported regular smoking than females (19.5%). The difference was most notable in the youngest age groups. National data since 1987 show smoking prevalence rates falling for both males and females.

Smoking Prevalence
by Age and Gender
Percent of adults who smoked, Wash. 1994



Teens smoked more during their pregnancies than adult women. Over 27% of teens age 10-19 smoked during pregnancy, while 18% of women in their twenties reported smoking during pregnancy. Only 13.8% of women 30 and older smoked during pregnancy.

By gender, 24.3% of male adults report being a current smoker, compared with 19.5% for females. While more men continue to smoke than women, the disparity is diminishing over time.

Race and Ethnicity

A special 1990-1992 survey in Washington found higher tobacco use prevalence rates for certain racial populations—29.5% for African-Americans and 31.7% for Native Americans. The same study also reported Hispanics using tobacco at similar rates to the general population. A 1989 study by the Seattle-King County Department of Public Health found that 42.5% of Southeast Asian men reported smoking.

For smoking during pregnancy, there is great disparity among racial groups. In 1994, 30.6%(±2.2) of Native American women smoked during their pregnancies, with 40.3% (±4.4) of Native American teens smoking during pregnancy. Both Caucasian and African-American women smoked during pregnancy at a rate of approximately 17%. Asian/Pacific Islander and Hispanic women reported the lowest incidences of smoking during pregnancy, at 6.7% and 5%, respectively.

Income and Education

In 1994, smoking prevalence was highest among adults with incomes below $10,000 per year, with 43.8% reporting current smoking. Of those with incomes above $75,000, only 9.5% were reported smokers.

Only 10.5% of college graduates reported being current smokers, compared with 29.2% of adults with only high school graduation. Of adults who started high school but did not finish, 37% reported being current smokers. Similarly, smoking during pregnancy is most common among women who did not graduate from high school (30%) and least common among women with some college (8%).

Health Effects

Tobacco use and exposure is responsible for one of every five deaths in the US and is the single most important preventable cause of death and disease. About one half of all regular smokers will eventually die of tobacco-related illness.[1] It is estimated that eliminating all mortality due to smoking would increase average life expectancy by one to two years, and for those people who would die from smoking, the gain would be approximately 15 years. Tobacco use has powerful effects on morbidity and mortality due to a wide variety of causes.

Cancer. In 1993, there were 3043 cancer deaths in Washington attributable to smoking, including 2,433 lung cancer deaths. Smokeless tobacco use has also been identified as a risk factor for cancers of the oral cavity and pharynx.

Cardiovascular and Lung Disease. Smoking is a major risk factor for atherosclerosis, heart attack, stroke, and chronic lung disease. A total of 3,318 deaths in the state due to heart disease and stroke and 2,153 respiratory disease deaths were attributable to smoking in 1993.

Burn/Fire Deaths. Sixty Washingtonians died from burn and fire-related injuries caused by smoking in 1993. Cigarettes cause an estimated 45% of all fires and up to 56% of deaths from house fires.[2]

Infant Morbidity/Mortality. Maternal smoking during pregnancy is a risk factor for low birth weight, the leading cause of infant mortality.[3] Smoking during pregnancy is also a significant risk factor for spontaneous abortion and stillbirths. Parental smoking can also have long-term effects on a child's growth, intelligence, and behavior.

Environmental Tobacco Smoke. Exposure to environmental tobacco smoke or secondhand smoke is responsible for as many as 1,000 non-smoker deaths in Washington each year, due to a variety of causes. Environmental tobacco smoke exposure also contributes to respiratory problems in young children and infants.[4]

Barriers and Motivators

Advertising and Promotion. Tobacco industry advertising and promotion attempt to discount the health consequences of tobacco use. The tobacco industry spends an estimated $120 million in Washington state each year on advertising and promotion.[5]

Addiction. Nicotine is a highly addictive drug.[6] Studies have shown nicotine to be as addictive as heroine and cocaine. It takes five attempts at quitting for the average adult to successfully stop. Tobacco cessation services are not readily available through many health insurance plans, so cost is a barrier for cessation.

Environmental Tobacco Smoke Policy. While office work environments are smoke-free in Washington state, many non-office worksites continue to allow smoking. Restaurants, bars, bowling alleys, taverns, manufacturing and industrial sites are examples of places where smoking is not prohibited by law. Workers and the public can be exposed for long periods of time to secondhand smoke in these settings.

Economics. Cigarette purchases and consumption go down when prices increase.[7] Washington state currently has the highest cigarette excise taxes in the nation, yet cigarettes remain relatively inexpensive. After adjustment for inflation, the total tax on a pack of cigarettes is less now than it was in 1955.[8]

Manufacturing costs are low, and tax increases are sometimes absorbed, rather than passed through in the form of higher retail prices. Smokeless tobacco is taxed at a percentage of wholesale price, and this amounts to a much lower tax than for cigarettes when adjusted for nicotine content.

Inexpensive tobacco is also available in Washington through tribal smokeshops and military bases where state excise taxes are not applied.

Youth Access to Tobacco. Washington has a state law to limit youth access to tobacco, but lack of enforcement permits easy access to tobacco products by minors.

Schools. There is a lack of consistency in school tobacco use policies and norms throughout the state. State law prohibits the use of tobacco products on public school property, but enforcement is assigned to the individual school district. One school may ignore enforcement while another suspends those caught using tobacco. Any school with an alternative educational program may exempt itself from the tobacco prohibition.

Risk-Taking/Group Acceptance. Especially for youth, tobacco use may be seen as a way to gain acceptance among peers. Smoking and smokeless tobacco use are risk-taking behaviors, and customary approaches to prevention (e.g., just say no) may actually encourage teenagers to experiment with the forbidden.[9]

While young people are particularly vulnerable to tobacco advertising, the tobacco industry continues to focus its prevention effort on telling youth to wait until adulthood to make the decision to smoke or not to smoke. This marketing tactic of making smoking a "rite of passage" makes youth more eager to experiment.[10]

Role Models. Parents who smoke are role models for their children, as are older siblings. If it is acceptable for the parent to smoke, youth may justify their own experimentation and use.

Stress/Weight Control. Coping with stress and managing weight are frequent reasons given by smokers for their continued use of tobacco. While nicotine actually increases heart rate, there is a

perception that smoking helps people relax. The tobacco industry encourages this perception through its advertising.

High Risk Groups

Youth. Tobacco use can be considered a pediatric disease. More than 80% of adult smokers began smoking before the age of 18 years and more than 90% before age 20 years. While death due to tobacco use may not occur for decades, it is the use of this drug during the adolescent years that often creates lifelong addiction. Youth at risk for school dropout are particularly likely to take up smoking.[11]

Lower Socioeconomic Groups and Racial Minorities. Members of these groups have higher smoking rates and higher mortality due to smoking-related causes than the population at large.

Pregnant Women and Parents of Young Children. Smoking by members of these groups has adverse effects, not only on themselves, but also on fetuses, infants, and children in their care.[12]

Intervention Points, Strategies and Effectiveness

No one single strategy has proven effective in preventing tobacco use among youth and adults. The following list of strategies for health promotion, policy development and assessment comprises the recommendations of major authorities in the field.[13] [14] [15]

Health Promotion

- Counter-advertising campaigns to change social norms about tobacco use and draw attention to the tobacco industry's marketing and advertising tactics targeting youth and minority populations have proven effective in California.[16]
- Multifaceted intervention programs designed specifically for pregnant women that begin early in pregnancies have shown effectiveness[17] [18]
- The Centers for Disease Control and Prevention's school health guidelines for preventing tobacco use and addiction are based upon extensive research reviews to identify the most effective approaches.[19]
- A recent review of tobacco cessation programs concluded that affordable, accessible, and culturally appropriate cessation and relapse prevention programs have a small but consistent positive effect. [20]

Policy Development

- Policies prohibiting smoking in all public places and worksites, including but not limited to schools, health care facilities, restaurants, bars, taverns, bingo halls, and bowling alleys have proven effective in reducing public exposure to the hazards of environmental tobacco smoke if adequately enforced.[21]
- Tobacco companies often distribute free tobacco samples in places frequented by adolescents and children, such as rock concerts, fairs and rodeos.[22] A ban on tobacco sampling would eliminate youth access from these sources.[23]
- Historically, tobacco excise taxes have not kept pace with inflation.[24] Taxation indexed to inflation would assure that the relative price of tobacco does not decrease over time. Higher excise tax should significantly reduce the number of smokers.[25]
- Clinically proven cessation programs are not covered under Medicaid and many other third party payers, including some health maintenance organizations.
- Frequent checks of retailer compliance combined jointly with retailer education on youth access laws have proven effective in reducing the sale of tobacco to minors.[26] Random checks of retailer compliance in every county would effectively reduce illegal sales of tobacco products to minors.
- Tobacco advertising via billboards, point-of-purchase, magazines, sporting events, and promotional giveaways (e.g., tee shirts, caps, etc.) does appeal to youth.[27] RJR Nabisco's cartoon camel promotes Camel cigarettes to children, and six-year olds can recognize Joe Camel as well as Mickey Mouse. [28] [29] Tobacco advertising and promotion restrictions would reduce the impact of such advertising on children and youth.
- Self-serve displays of tobacco are an easy source for youth, either from shoplifting or from purchasing without having to ask a clerk for the product. Compliance checks in Washington state have shown that youth can purchase more easily from stores with self-service displays than from stores requiring the assistance of a clerk (i.e., behind-the-counter sales). Eliminating self-

service displays would reduce youth access to tobacco via shoplifting and unsupervised acquisition and purchase.

Assessment

Further research is needed to ascertain the feasibility and effectiveness of individual strategies and of this overall approach to tobacco use reduction. In particular, studies are needed to:

- Assess the effectiveness of current laws which aim to reduce youth access to tobacco and public exposure to environmental tobacco smoke, and recommend improvements to existing laws and regulations as necessary.
- Evaluate the efficacy of teen tobacco cessation programs.

See related sections on All Cancer, Lung Cancer, Cervical Cancer, Chronic Obstructive Pulmonary Disease, Coronary Heart Disease and Stroke, Low Birth Weight, Infant Mortality.

Data Sources

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Smoking in pregnancy: Washington State Department of Health, Center for Health Statistics.

State survey data: Washington State Department of Health. Behavioral Risk Factor Surveillance System (BRFSS) and Washington State Survey of Adolescent Health Behaviors.

National survey data: Centers for Disease Control and Prevention. BRFSS.

For More Information

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[13] Ibid.

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